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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/787,840

07/06/2001

Mark Leslie Smythe

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HAYNES AND BOONE, LLP

IP Section

2323 Victory Avenue

Suite 700

Dallas, TX 75219

EXAMINER

KAM, CHIH MIN

ART UNIT

PAPER NUMBER

1656

MAIL DATE

DELIVERY MODE

03/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/787,840	Applicant(s) SMYTHE ET AL.	
	Examiner CHIH-MIN KAM	Art Unit 1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-31,35 and 39-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-21,24-31,39,41 and 42 is/are allowed.
- 6) ☒ Claim(s) 1,3,7,8,14 and 22 is/are rejected.
- 7) ☒ Claim(s) 2,4,5,9-13,15,16,23,35 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

1. Claims 1-5, 7-31, 35 and 39-42 are pending.

Applicant's amendment filed January 7, 2009 is acknowledged, and applicants' response has been fully considered. Claims 17, 22, 24, 26 and 30 have been amended, and claim 43 has been cancelled. Therefore, claims 1-5, 7-31, 35 and 39-42 are examined.

Withdrawn Claim Objections

2. The previous objection to claims 17-31, 39 and 40 is withdrawn in view of applicants' amendment of the claims, and applicant's response at page 21-22 in the amendment filed January 7, 2009.

Withdrawn Claim Rejections - 35 U.S.C. § 112

3. The previous rejection of claim 43 under 35 U.S.C. § 112, first paragraph, is withdrawn in view of applicants' cancellation of the claims, and applicant's response at page 22 in the amendment filed January 7, 2009.
4. The previous rejection of claim 43 under 35 U.S.C. § 112, second paragraph, is withdrawn in view of applicants' cancellation of the claims, and applicant's response at page 22 in the amendment filed January 7, 2009.

New Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 7, 8, 14 and 22 are rejected under 35 U.S.C. 102(b) as anticipated by Johnson *et al.* (J. Peptide Sci. 1, 11-25 (1995); reference C8 in the IDS filed October 15, 2002).

Johnson *et al.* teach the use of salicylaldehyde or 4-methoxysalicylaldehyde (also named as 2-hydroxy-4-methoxybenzaldehyde; abbreviated as Hmb) to prepare N-(2-hydroxybenzyl)amino acids or N-(2-hydroxy-4-methoxybenzyl)amino acids (e.g., N-(2-hydroxy-4-methoxybenzyl)-L-alanine; page 20; general method 2), which then reacts with Fmoc amino acid symmetric anhydrides in dichloromethane (Table 7). The reference also teaches coupling of Fmoc-alanine to N-substituted tripeptide derivative **14** (R=H and R=Me), it also indicates the analogous 2-hydroxy-4-methoxybenzyl derivative behaved similarly (Table 4), in which when the *o*-methoxyl group was replaced with hydroxyl group, a remarkable rate enhancement for the formation of product was observed (page 15, right column; Table 4), where rapid rearrangement through the 6-membered cyclic intermediate (structure **15**) and some tentative rules regarding the acylation of Hmb-peptide resins for the coupling of Fmoc-Y-OH to (Hmb)X-peptide resin are discussed (pages 16-17). Since 4-methoxysalicylaldehyde contains 2-hydroxy (as XH), 4-methoxy (as Y, a known electron-withdrawing group, see Art of Record below) and aldehyde (as Z in formula II) and is used to link to an amino acid or tripeptide-resin to form secondary amine (see structure **14**), which then reacts with Fmoc-amino acid with activated carboxylic acid (i.e., pfp or anhydride) to form a peptide bond, which meets the criteria of claims 1, 3, 7, 8, 14 and 22.

Claim Objections

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6. Claims 2, 4, 5, 9-13, 15, 16, 23, 35 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Claims 1, 3, 7, 8, 14 and 22 are rejected; and claims 2, 4, 5, 9-13, 15, 16, 23, 35 and 40 are objected to. It appears that claims 17-21, 24-31, 39, 41 and 42 are free of art.

Art of Record

Sindelar *et al.* (U.S. Patent 5,173,499) teach 3,5-dimethoxybenzyl alcohol (compound **8**) contains two electron-withdrawing methoxy groups (column 14, lines 20-28 and 49).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (571) 272-0948. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached at 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Chih-Min Kam/

Primary Examiner, Art Unit 1656

CMK

March 7, 2009